



Monaghan County Council
Cuidimh Chosna Mionchúir



Cavan
Comhairle Contae Cavan



PRESENTS

cavan & monaghan

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Monaghan

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Festival

SCIENCE FESTIVAL

science in everyday life



**FREE
EVENTS**



MONAGHAN EVENTS GUIDE

9TH-23RD NOV 2019

cavanmonaghansciencefestival.ie

INTRODUCTION

Welcome to the Cavan Monaghan Science Festival 2019 – an award winning regional festival celebrating, exploring and promoting the wonders of science, technology, engineering, arts and maths in our everyday lives. This year the festival will take place from the 9th – 23rd November across the two counties.

The festival is a Monaghan County Council and Cavan County Council initiative in partnership with Cavan Monaghan ETB, and generously funded by Science Foundation Ireland. We work in partnership with several local, regional and national agencies, organisations and companies.



Our Science Festival is organised as part of the national Science Week and this year it will focus on climate action, seeking to help people understand climate change, how science and technology can help us create a positive climate future and the impact we as individuals can have on climate change. While one person may feel unable to make a difference on their own, a collective effort to offset our carbon emissions will have a positive impact – Think Global, Act Local!

With events from astronomy to zoology, this year's festival wants everyone to come out again to discover more wonders of science in our everyday lives. Science is very important in our lives. We all benefit from scientific knowledge from the food we eat, the air we breathe to how we sleep. Science and technology power our world, improves our health and can even entertain us. Everywhere you look, there is science!

We are delighted to welcome some of the best national and international scientists, researchers, speakers, creators and artists to our counties who will take you on a new road of discovery from the science of cider, to forensics, gluten free baking to the story of the night sky, what is a plant-based diet or want to make a solar night light!

We hope you enjoy our festival of discovery, learning and fun!

We appreciate your feedback and you do so by emailing us at sciencefestival@monaghancoco.ie

Discover! Be inspired!
Science Festival Steering Committee

#BelieveInScience

ESSENTIAL INFORMATION:

Please note that all events listed can be subject to change. Check on the website for the most up-to-date information.

BOOKINGS:

Bookings are required for all events except the Family Fun Day. To pre-book your place, contact the telephone number or email under the event.

Bookings open from Monday 28th October 2019

You may be refused entry if you arrive after an event has started even if you have booked.

QUERIES:

Queries in relation to events in County Cavan please contact 049-4378506 or sciencefestival@cavancoco.ie

Queries in relation to events in County Monaghan please contact 047-74700 or sciencefestival@monaghancoco.ie

YOUR OPINIONS MATTER:

We will be carrying out short evaluations at events, so please let us know what you think so we can make the next festival even bigger and better! You can also email your suggestions to sciencefestival@monaghancoco.ie

FILM AND PHOTOGRAPHY:

We will be documenting the festival for use in future publicity. Please speak to a member of staff if you prefer not to be photographed or filmed.



PHOTOGRAPHY COMPETITION

You are invited to enter a photography competition to showcase “Climate Action”. There will be prizes for 1st, 2nd and 3rd place. The winners will be displayed in the events space in the Johnston Central Library in Cavan Town during the 2019 Science Festival.

The winners will be announced at the beginning of the Cavan Monaghan Science Festival and their photographs will also feature in local media as well as other platforms and publications linked to the Science Festival. Please send all entrants to environ@cavancoco.ie and entries will be accepted up to and including Friday 25th October 2019.

The competition is open to over 18's. We will accept up to 3 photographs per person in either colour or black and white.

Please include a description of your picture as well as your name, address, email and phone number on your entries. Judge's decision will be final.

MAD PROFESSOR FAMILY SCIENCE SHOWS

Our Mad Professor scientist shows will delight everyone with great fun science activities. Watch your children learn about air & sound, visual puzzles, density and oil & water, along with the amazing manufacture & release of various gasses (mostly pleasant)! Learn how make slime & goo & watch a volcano erupt, bottles explode, small plastic boxes fly skyward & coke spray 20 feet into the sky. Many of the experiments consist of material found at home, so the children will then have the knowledge - so parents be warned.

Suitable For: All ages

Bookings: Text the mobile number with your name and number of attending.

When	Where	Times	To Book
Sat 9th Nov	Blackwater Learning Centre, Emyvale	11am	0877035381
Sat 9th Nov	Tydavnet Community	1:30pm	0877035381
Sat 9th Nov	Sliabh Beagh, Knockatallon	4pm	0877035381
Sat 16th Nov	Latton Resource Centre	11am	0877035381
Sat 16th Nov	Hall Street Church Hall, Ballybay	1.30pm	0877035381
Sat 16th Nov	Tullycorbet Community Centre	3.30pm	0877035381

HOW TO SAVE THE PLANET IN 45 MINS - FAMILY SCIENCE SHOWS

A sustainability science show exploring the what, why and how we reduce, reuse and recycle. Follow Dr Ken as he attempts to slim his bin with the appliance of science. Find out how you too can affect climate change one tree at a time. Then join him on his one-wheel energy saving device as he bids to save money and mankind. He may well be talking (about) rubbish but it will make sense!

Suitable For: All ages

Bookings: Contact Iontas Theatre on details below.

While you're there, be sure to check out the Print Museum activities.

When	Where	Times	To Book
Sat 9th Nov	Iontas Theatre, Castleblayney	11am and 1pm	Iontas Theatre website or 042-9753400

PRINT MUSEUM

Learn and have fun with the traditional craft of Letterpress Printing! Children will work with artefacts from the Museum's collection and learn to hand set and print with metal type. The children will learn basic composing skills to construct their names, which will then be inserted into a 'WANTED' poster and printed on a Farley Proofing Press, a key working piece of the Museum's collection. Once that is done they will go on to make a Printers Hat!

A printer's hat was one of the first things an apprentice printer learned to make and during this activity children learn to make a similar hat using the traditional Japanese paper craft of origami. Once the hat is complete children decorate and personalise their hat using crayons and traditional wooden ink stampers.

Suitable For: All ages

Bookings: Contact the telephone numbers below with your name and number of attending.

When	Where	Times	To Book
Sat 9th Nov	Iontas, Castleblayney	11am-1pm	042-9740281
Sat 16th Nov	Carrickmacross Library	11am-1pm	042-9661148

BUILD YOUR OWN MINIATURE WIND TURBINE

Wind Turbines are becoming an increasingly familiar feature of our Landscape, offering renewable energy and an alternative to burning of fossil fuels. In this workshop, children will learn how to build their own working model of a Wind Turbine using Cardboard and some basic circuitry.

Suitable For: 8 years+

Bookings: Contact the library telephone number below with your name and number of attending

When	Where	Times	To Book
Mon 11th Nov	Monaghan Library	4pm	047-81830
Tue 12th Nov	Clones Library	4pm	047-74712
Wed 13th Nov	Carrickmacross Library	4pm	042-9661148
Thur 14th Nov	Ballybay Library	4pm	042-9741256
Fri 15th Nov	Castleblayney Library	4pm	042-9740281



BIKE REPAIR & MAINTENANCE DEMONSTRATION

Cycling has many benefits such as reducing obesity, improving fitness, boosting emotional and mental health. It is also great for the environment and can help to decrease the amount of traffic congestion and pollution in our world. Cycling just 10 km each way to work could save around 1500kg of greenhouse gas emissions each year. Most car trips to school are within cycling distance. Cycling these trips could significantly reduce congestion and improve safety for children, not to mention the added benefits of cycling to work or school.

If you have a bike lying around that you're not using why not come along to this talk from Francis Dolan of Bike Green (www.bikegreen.ie) and learn how to get it back on the road.

Francis will show you how to

- understand the parts of the bike and their uses
- take care of your bike
- complete a bike safety check
- fix a puncture
- make minor gear and brake adjustments and stop those squeaks
- fix your brakes and replace cables and pads
- make comfort adjustments of saddle and handlebars to suit your needs

Suitable For: General Public **Bookings:** Contact the library number below with your name and number of attending

When	Where	Times	To Book
Mon 11th Nov	Clones Library	7pm	047-74712
Mon 18th Nov	Carrickmacross Library	7pm	042-9661148

WHAT CAN I PUT IN MY BIN???

Plastic waste is a global issue but how can we deal with it at a local level? Are you putting recyclable waste into your general waste or vice versa? Do you know what happens after your waste is collected? Come along to this Lunch time Session with Monaghan County Council's Environmental Awareness Officer for an informative presentation on what to put in your bin. The presentation will be followed by a visit to the nearby recycling centre in Carrickmacross. Don't worry about missing your lunch – Tea & Sandwiches will be provided!

Suitable For: Adults **Bookings:** Contact the library number below with your name and number of attending

When	Where	Times	To Book
Tue 12th Nov	Carrickmacross Library	1pm	042-9661148

THE SCIENCE OF TRADITIONAL CURES

We are delighted to welcome Anne Bleakley to this year's Festival. Anne is an Herbalist and a biomedical scientist who explores both the traditional origins of the Cures as well as the science behind why they may work. Following a recent event as part of National Heritage Week, Shirley Clerkin, Heritage Officer explained how "Cures hold an intangible and indigenous knowledge about the medicinal characteristics of many of our plant species, and even microbes and minerals in water that we've forgotten. They demonstrate the importance of our biodiversity for medicine in the past and indeed in the future. Universal access to medicine is expressed in how the cure was given anyone who asked, as a real societal good." Don't miss what promises to be an informative & entertaining evening. Booking will be essential as demand is sure to be high.

Suitable For: General Public **Bookings:** Contact the library number below with your name and number of attending

When	Where	Times	To Book
Tue 12th Nov	Clones Courthouse	7.30pm	047-74712

PEOPLE FOR BEES WITH THE IRISH WILDLIFE TRUST

Did you know that a world without Bees would struggle to sustain Human Life? Come along to this informative talk by the Irish Wildlife Trust to learn about this fascinating creature, why they are so important and how you can help identify & sustain them.

Suitable For: General Public **Bookings:** Contact the library number below with your name and number of attending

When	Where	Times	To Book
Wed 13th Nov	Monaghan Library	11am	047-81830
Wed 20th Nov	Carrickmacross Library	7pm	042-9661148

WHAT A PLANT-BASED DIET IS AND WHY

YOU SHOULD TRY IT

Switching to a plant-based diet can help fight climate change, UN experts have said. But is it doable? This presentation by Dr. Ailis Brosnan will take you through exactly what a plant-based diet is, how adding more plant-based foods can really benefit you and give you some practical tips for getting started. There will be lots of time for questions too. Dr. Brosnan has been vegan over 20 years and brings a wealth of experience and knowledge from her 30 years working in the health and fitness field. She has three degrees in the health and fitness field along with numerous certifications such as Plant-based Nutrition and Living Foods instructor.

Suitable For: General Public **Bookings:** Contact the library number below with your name and number of attending

When	Where	Times	To Book
Thurs 14th Nov	Carrickmacross Library	7.30pm	042-9661148

THE SCIENTIFIC DILEMMAS OF DIPPY THE DINOSAUR

Join Scientific Sue on yet another ROAR-some journey of scientific discovery!

Learn about how Palaeontologists, the intrepid explorers of uncharted territories, discover fossils of prehistoric proportions and then use them to unravel the puzzles surrounding the lives of dinosaurs.

This unique, educational and entertaining show investigates and explores some mind-boggling dilemmas of the magnificent sauropod: **DIPLODOCUS**.

What is so special about their tails?

How did they digest the huge amount of plant food required to feed their humongous bodies?

Why are so many fossilised sauropods unearthed headless?!
A fun informative show for all filled with brilliant science. Promoting the concept of working scientifically

Suitable For: All Ages **Bookings:** Contact the Garage Theatre on the details below with your name and number of attending

When	Where	Times	To Book
Sat 16th Nov	Garage Theatre, Monaghan	11am & 2pm	Garage Theatre website or 047-39777

SCIENCE IS MAGIC WITH MICHAEL MOYLAN

Michael was such a hit last year we've invited him back for more! In this interactive show you will do the science experiments yourself. Why does static electricity make your hair stand on end? Can you hold a bucket full of water held upside down over your head and not get wet? How do you make a magnet with a wire, battery and a nail? How does a hot air balloon fly and how do I make my own one? The human body, sound, light, heat and many other subjects.

Suitable For: All Ages **Bookings:** Text the mobile number with your name and number of attending

When	Where	Times	To Book
Sat 9th Nov	Scotshouse Community Centre	11am	0877035381
Sat 9th Nov	Acorn Centre Newbliss	1.30pm	0877035381
Sat 9th Nov	Carn Centre Aghabog	3.30pm	0877035381
Sat 16th Nov	Inniskeen Community Centre	11am	0877035381
Sat 16th Nov	Corduff Community Centre	1.30pm	0877035381
Sat 16th Nov	Oram GAA Centre	4pm	0877035381

BUBBLY MATHS FUN

Bubbly Maths Entertainers perform maths shows the UK and around the world, engaging audiences using mesmerising resources. The props? Magical soap bubbles and giant balloons. These are used to discover the maths & science of bubbles and to explore the mathematical fundamentals of shape and measurement. A fun look at Maths which is sure to entertain and education Children of all ages.

Suitable For: All Ages **Bookings:** Contact the library number below with your name and number of attending

When	Where	Times	To Book
Sat 16th Nov	Carrickmacross Library	11am	042-9661148
Sat 16th Nov	Clones Courthouse	2pm	047-74712

Creative Approaches to Primary School

- STEM IN EDUCATION for Primary school Teachers

MineCraft and Materials: CPD Training Workshop for Primary school Teachers

This teacher education workshop with AMBER brings real world materials science into the primary classroom. Use a bespoke MineCraft Extension (BetterGeo) to mine for different materials, learning about rocks and minerals along the way, followed by a realworld and virtual environment which explores materials, minerals and applications in our everyday lives. This teaching resource is particularly useful for 3rd – 6th class teachers, but all are welcome. All participants will receive a free copy of teaching resources, access to MineCraftBetterGeoExtension for your class and a virtual tour with your class of an AMBER lab in 2020. The workshop is 2hours in duration.

When	Where	Times	To Book
Mon 18th Nov	Monaghan Education Centre	4pm	0877035381

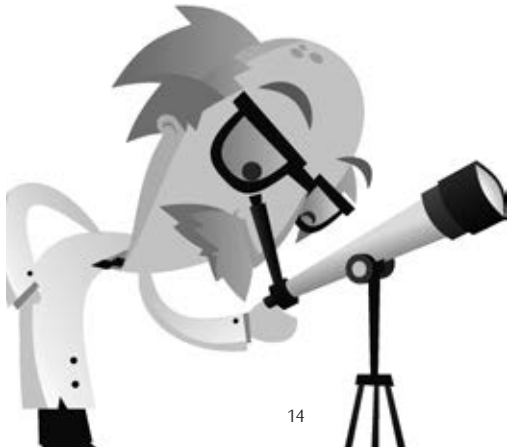
EUROPEAN RESEARCHERS NIGHT

Did you know that Clones Library is home to a European Direct Information Centre. We are delighted to team up with Clones EDIC to present a night which will showcase some of the current dynamic and innovative research being carried out thanks to EU Funding.

This event aims to stimulate interest in and promote curiosity for scientific research. Scientists who have received EU funding will be on hand to share their projects and passions with the public. The importance of careers in science and research will be highlighted.

Suitable For: General Public **Bookings:** Contact the library number below with your name and number of attending.

When	Where	Times	To Book
Tue 19th Nov	Clones Library	7.30pm	047-74712



BEFORE THE FLOOD-THINKING GLOBAL, ACTING LOCAL

In the late winter of 2014, Leonardo DiCaprio called actor and documentarian Fisher Stevens with an idea: he wanted to collaborate on a documentary that would explore the causes and effects of climate change around the world, and the urgent need to transition away from using fossil fuels — and he wanted to get started right away.

Whilst DiCaprio was making the film, Mícháel Callaghan was advocating for Climate action on a more local level. Mícháel co-founded Transition Monaghan, a community group in Monaghan that promotes sustainability and environmental issues. He is a passionate advocate for Climate Action and is currently undertaking a PhD in Environmental Law

For this event, Mícháel will be presenting his ideas on how Monaghan People can act locally to promote a more sustainable environment. His presentation will be followed with a screening of the DiCaprio Documentary *Before the Flood* which presents a riveting account of the dramatic changes now occurring around the world due to climate change, as well as the actions we as individuals and as a society can take to prevent catastrophic disruption of life on our planet. The film follows DiCaprio as he travels to five continents and the Arctic speaking to scientists, world leaders, activists and local residents to gain a deeper understanding of this complex issue and investigate concrete solutions to the most pressing environmental challenge of our time.

Suitable For: General Public

When	Where	Times	To Book
Wed 20th Nov	Monaghan Market House	7.30pm	0877035381

CONNECTING WITH SELF, CONNECTING WITH NATURE

Come along to the Ballybay Wetlands for a relaxing nature connection workshop. Whether it is the stresses of daily life, the worries over climate change, or the Brexit Blues, sometimes we just need to press pause and learn to appreciate what is all around us. On the day, you will have the opportunity to participate in some simple meditations, hear some poetry, and engage in nature connection workshops. The meditations will help ground us and calm our minds, so we can then fully immerse ourselves in the surroundings of the Ballybay Wetlands. The workshop itself will be relaxing, slow paced and will invite us to use our full senses to experience nature in a new way.

Suitable For: Over 16's **Bookings:** Contact the number below with your name and number of attending.

When	Where	Times	To Book
Sun 10th Nov	Ballybay Wetlands	10am	0877035381

THE SCIENCE OF CIDER – AN INTRODUCTION

Press your own home grown or locally sources apples to make juice and cider. This introductory workshop is for people with an interest in making cider at home and those looking for a creative and tasty way to use their apples. Using traditional processes, Michael will guide you through the process and give a brief overview of the traditions of cider making; the uses of different varieties; milling, pressing and using the equipment; as well as fermentation, bottling and storage.

Please note: You must bring along your own bottle!

Suitable For: Adults only 18+ **Bookings:** Contact the number below with your name and number of attending

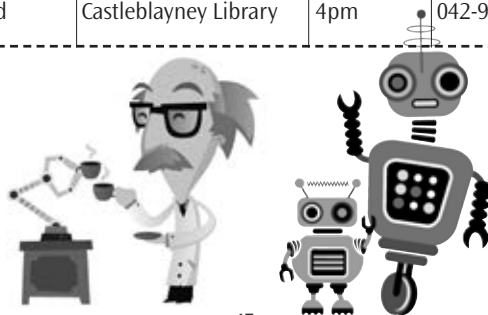
When	Where	Times	To Book
Fri 15th	Monaghan Town Allotments	11am	0877035381

MAKE A SOLAR NIGHT LIGHT

We use electricity every day to do things like turn on lights or cook our food. Electricity comes from many different sources but in this experiment, we are going to focus on solar energy. Solar energy is energy from the sun and is considered a renewable resource because it can be naturally replaced and can be used over and over again. In this workshop we are going to create a solar night light in a jar. A small solar panel on top of the jar will collect and store energy from the sun all day, and a light inside the jar will glow at night. You can have your own nightlight without having to flip on a light switch!

Suitable For: 7+ years **Bookings:** Contact the library number below with your name and number of attending.

When	Where	Times	To Book
Fri 15th	Monaghan Library	4pm	047-81830
Tue 19th	Carrickmacross Library	4pm	042-9661148
Wed 20th	Clones Library	4pm	047-74712
Thur 21st	Ballybay Library	4pm	042-9741256
Fri 22nd	Castleblayney Library	4pm	042-9740281



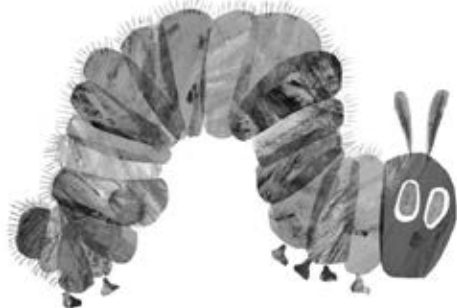
SCIENCE STORYTIME SESSIONS

Parents/Guardians are invited to our storytime sessions during the Science Festival where young children will learn about science in a fun and interactive way. By using a range of books, children will be in awe of the fascinating stories about nature and our planet. After the stories are read, we will make crafts based on the stories.

We will be reading the classic book 'Very Hungry Caterpillar' which features a caterpillar who eats his way through a wide variety of foodstuffs before pupating and emerging as a butterfly.

Suitable For: Preschool Aged Children **Bookings:** To book contact the library number below with name and number of children

When	Where	Times	To Book
Fri 15th Nov	Clones Library	11.15am	047-74712
Fri 15th Nov	Carrickmacross Library	11.15am	042-9661148
Wed 20th Nov	Monaghan Library	11.15am	047-81830



FAMILY FUN DAY

**SATURDAY
23RD NOVEMBER
12-5PM**

Monaghan Institute, Armagh Rd, Monaghan
No booking required – but come early to guarantee entry to workshops and shows.



*P.T.O.
for more
information*

We end our two-week festival with an energy packed family science day at Monaghan Institute. With over 25 different activities, there is something for the whole family to engage in and learn about science, technology, engineering, art and maths in a fun interactive way.

You have been warned now – come early and expect to stay to the end! From the Build It and Make it Area to lego mindstorm, coderdojo, the Fablab with 3D printers and creating area, to science shows, want to interact with some animals or find out about aquatic life in our rivers and lakes.

Make some bubbles with the fantastic Caroline and her Bubbly Maths shows, or have your imagination sparked by the Mad Professor or join in the experiments with Dr Ken or

can you hold a bucket of full water held upside down over your head and not get wet with Mike and his Science of Magic show.

How about having a go at making a printer's hat? Or have fun with science games? Want to find out about climate change? Or test your brain with linguistic Olympiad games.

Or get up and close with live sea creatures, including starfish, shrimp, crab and much more!

